

CLAIMS

WHAT IS CLAIMED IS:

1. A method for maintaining handheld computers at a location remote
from a home maintenance node containing a maintenance database for at least one
5 of the handheld computers and connected to the remote location through a
network, the method comprising:

connecting one of the handheld computers to a maintenance node;

detecting whether the maintenance node is the home maintenance node for
the handheld computer;

10 locating the home maintenance node for the handheld computer if the
connected maintenance node is not the home maintenance node;

opening a maintenance session between the handheld computer and the
home maintenance node; and

performing maintenance on the handheld computer.

2. The method of claim 1 wherein there is a one-to-one relationship between the handheld computers and the maintenance nodes such that each of the maintenance nodes represent the home maintenance node for only one handheld computer.

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3. The method of claim 1 wherein a central maintenance node is the home maintenance node for all of the handheld computers.

4. The method of claim 1 wherein connecting the handheld computer to the maintenance node comprises connecting a serial line between the handheld computer and a personal computer.

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5. The method of claim 4 wherein connecting a serial line comprises placing the handheld computer in a cradle connected to the serial line.

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6. The method of claim 1 wherein detecting whether the maintenance node is the home maintenance node comprises comparing an identifier for the handheld computer with an identifier stored in a maintenance database of the home maintenance node.

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7. The method of claim 1 wherein locating the home maintenance node for the handheld computer comprises connecting to a network coupled to a plurality of home maintenance nodes.

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8. The method of claim 7 wherein the network is an enterprise network.

9. The method of claim 1 wherein locating the home maintenance node for the handheld computer comprises connecting to a network coupled to a central maintenance node containing maintenance databases for each of the handheld computers.

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10. The method of claim 1 wherein opening a maintenance session between the handheld computer and the home maintenance node comprises running a maintenance manager stored on the home maintenance node.

11. The method of claim 1 wherein performing maintenance on the handheld computer comprises synchronizing data stored on the handheld computer with data stored on a maintenance database located in the home maintenance node.

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12. The method of claim 1 wherein performing maintenance on the handheld computer comprises:

reading data from the handheld computer;

storing said data at least temporarily on the computer system;

scanning said data for viruses with a virus detection program; and

updating data on the handheld computer based on results of the scanning.

13. The method of claim 12 further comprising cleaning said data of viruses identified during the scanning.

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14. The method of claim 1 wherein performing maintenance on the handheld computer comprises running diagnostics on the handheld computer.

15. The method of claim 1 wherein performing maintenance on the handheld computer comprises updating software installed on the handheld computer.

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16. The method of claim 1 wherein performing maintenance on the handheld computer comprises deleting unauthorized software from the handheld computer.

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17. A system for maintaining a plurality of handheld computers configured for connection to a network having a plurality of maintenance nodes coupled thereto, each of said plurality of handheld computers having a home maintenance node, the system comprising:

5 for each handheld computer, a maintenance database stored on the home maintenance node and associated with the handheld computer; and

 a maintenance manager installed on each of the maintenance nodes and operable to detect whether the maintenance node is the home maintenance node for the handheld computer connected to the maintenance node, locate the home maintenance node for the handheld computer if the maintenance node is not the
10 home maintenance node, open a maintenance session across the network between the located home maintenance node and the connected handheld computer, and perform a maintenance operation using the maintenance database stored on the home maintenance node.

15 18. The system of claim 17 wherein there is a one-to-one relationship between the handheld computers and the maintenance nodes such that each of the maintenance nodes represent the home maintenance node for only one handheld computer.

19. The system of claim 17 wherein a central maintenance node is the home maintenance node for all of the handheld computers.

20. The system of claim 19 wherein the central maintenance node is a server.

21. The system of claim 19 wherein the central maintenance node is connected to the Internet.

22. The system of claim 17 wherein the handheld computer is connected to the maintenance node through a high-speed communications interface.

23. The system of claim 22 wherein the handheld computer is connected to the maintenance node through a serial line.

24. The system of claim 23 wherein the serial line is connected to a cradle configured to hold the handheld computer.

25. The system of claim 17 wherein the network is an enterprise network.

26. The system of claim 17 wherein the maintenance manager is
configured to synchronize data stored on the handheld computer with data stored
on the maintenance database located in the home maintenance node.

27. The system of claim 17 wherein the maintenance manager is
configured to read data stored on the handheld computer, store said data at least
temporarily on the maintenance node, and scan said data for viruses with a virus
detection program.

28. The system of claim 27 wherein the maintenance manager comprises
a data cleaner operable to clean infected data identified by the virus detection
program.

29. The system of claim 17 wherein the maintenance manager is
configured to run diagnostics on the handheld computer.

30. The system of claim 17 wherein the maintenance manager is configured to update software installed on the handheld computer.

5 31. The system of claim 17 wherein the maintenance manager is configured to delete unauthorized software from the handheld computer.

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32. A computer program product for maintaining handheld computers at a location remote from a home maintenance node containing a maintenance database for at least one of the handheld computers and connected to the remote location through a network, the product comprising:

- 5 computer code that creates a communication link between one of the handheld computers and a maintenance node;
- computer code that detects whether the maintenance node is the home maintenance node for the handheld computer;
- computer code that locates the home maintenance node for the handheld computer if the connected maintenance node is not the home maintenance node;
- 10 computer code that opens a maintenance session between the handheld computer and the home maintenance node;
- computer code that performs maintenance on the handheld computer; and
- a computer readable medium that stores said computer codes.

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33. The computer product of claim 32 wherein the computer readable medium is selected from the group consisting of CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, and a data signal embodied in a carrier wave.

34. The computer product of claim 32 wherein there is a one-to-one relationship between the handheld computers and the maintenance nodes such that each of the maintenance nodes represent the home maintenance node for only one handheld computer.

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35. The computer product of claim 32 wherein a central maintenance node is the home maintenance node for all of the handheld computers.

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36. The computer product of claim 32 further comprising computer code that reads data stored on the handheld computer and scans the data for viruses.

37. The computer product of claim 32 further comprising computer code that performs diagnostics on the handheld computer.

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38. The computer program product of claim 32 further comprising computer code that identifies software installed on the handheld computer, transfers updated versions of the software from a server connected to the network, and updates software installed on the handheld computer.